

CLAIMS

WHAT IS CLAIMED IS:

1. A method for establishing a call to a wireless directory number (DN) associated with a wireless mobile station, said wireless DN being one of a non-geographic DN and a non-dialable DN, said method comprising:

5 receiving a local access DN at an originating switching node; identifying a signaling node associated with said local access DN;

obtaining, from a database residing at a home location register, said wireless DN associated with said local access DN;

utilizing said wireless DN to determine a route that includes said originating switching node and a visited switching node serving said wireless DN; and

establishing a connection to said wireless mobile station via said determined route.

2. A method as claimed in claim 1 wherein said local access DN is a geographic DN maintained at said originating switching node.

3. A method as claimed in claim 2 further comprising associating said geographic DN with said wireless DN in said database residing at said home location register prior to said receiving operation.

8. A method as claimed in claim 1 wherein said obtaining operation comprises:

receiving, at said home location register, a location request
5 from said signaling node that includes said local access DN; and
accessing said database to obtain said wireless DN associated with said local access DN.

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9. A method as claimed in claim 1 further comprising sending, in response to said obtaining operation, a routing request that includes said wireless DN to a visitor location register with which said wireless mobile station was last registered.

10. A method as claimed in claim 9 further comprising:
receiving, at said home location register, a temporary local directory number (TLDN) associated with said wireless DN in response to said routing request; and
5 employing said local access DN to forward said received TLDN to said originating switching node.

11. A method as claimed in claim 10 wherein said employing operation comprises:

obtaining, from said database, said local access DN associated with said wireless DN;
5 associating said local access DN with said TLDN;

forwarding said TLDN associated with said local access DN to said signaling node; and

relaying said TLDN associated with said local access DN from said signaling node to said originating switching node.

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~~12.~~ A telecommunications network comprising:

an originating switching node configured to determine when a local access directory number (DN) associated with a wireless mobile station has been received and to generate a routing request that includes said local access DN;

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a signaling node in communication with said originating switching node, said signaling node being configured to send a location request that includes said local access DN in response to receipt of said routing request;

a home location register in communication with said signaling node, said home location register including a database having a wireless DN associated with said local access DN, said wireless DN being one of a non-geographic DN and a non-dialable DN, said home location register being configured to access said database to obtain said wireless DN and utilize said wireless DN to obtain a temporary local directory number (TLDN) allocated to said wireless mobile station; and

a visited switching node serving said wireless DN, wherein said originating switching node is operative to establish a connection to said wireless mobile station using said TLDN via a route that includes said originating switching node and said visited switching node.

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13. A network as claimed in claim 12 wherein said local access DN is a geographic DN maintained at said originating switching node.

14. A network as claimed in claim 12 wherein said originating switching node includes an Advanced Intelligent Network (AIN)-capable Service Switching Point.

15. A network as claimed in claim 12 wherein said originating switching node includes a trigger for identifying a call destined to said wireless DN.

16. A network as claimed in claim 15 wherein said trigger includes an index and an identifier identifying said signaling node.

17. A network as claimed in claim 12 wherein said signaling node includes an Advanced Intelligent Network (AIN)-capable Service Control Point.

18. A network as claimed in claim 12 wherein said home location register is further configured to receive said TLDN from a visitor location register (VLR) with which said wireless mobile station was last registered, said TLDN being associated with said wireless DN, and said home location register is further

configured to forward said TLDN to said signaling node utilizing said local access DN.

19. In a telecommunications network having an originating switching node, a signaling node, a visitor location register, and a visited switching node, a home location register system for determining a route for a call to a wireless directory number (DN) associated with a wireless mobile station, said wireless DN being one of a non-geographic DN and a non-dialable DN, and said route including said originating switching node and said visited switching node serving said wireless DN, said system comprising:

a processor;

a database, in communication with said processor, in which said wireless DN is associated with each of a first and a second local access DN, said first local access DN being maintained at a first originating switching node and said second local access DN being maintained at a second originating switching node;

a computer-readable storage medium; and

executable code recorded on said computer-readable storage medium for instructing said processor to perform operations comprising:

receiving a location request from said signaling node that

includes one of said first and second local access DNs;

accessing said database to obtain said wireless DN

associated with said one of said first and second local access DNs;

sending a routing request that includes said wireless DN to

said visitor location register with which said wireless mobile station was last registered;

receiving a temporary local directory number (TLDN)

associated with said wireless DN in response to said routing request; and

30 employing said local access DN to forward said received TLDN
to said signaling node.

20. A home location register system as claimed in claim 19
wherein said executable code instructs said processor to perform
further operations comprising:

obtaining from said database, in response to said receiving
5 operation, said one of said first and second local access DN
associated with said wireless DN;

associating said one of said first and second local access DN
with said TLDN; and

forwarding said TLDN associated with said one of said first
and second local access DN to said signaling node, said TLDN
being used to establish a connection to said wireless mobile
station via said route.

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